PUBLIC HEALTH REPORTS.

LEPROSY IN THE PHILIPPINE ISLANDS.

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At the beginning of the American occupation, August 13, 1898, there were in the Philippines, according to the best record obtainable, between 3,500 and 4,000 lepers. While it is true that many of the reported cases were, on the application of more accurate diagnostic methods than had at first been employed, found not to be leprosy, there were enough obscure cases overlooked to contraindicate any revision of the figures. There were never any grounds for the wild estimates, ranging from 10,000 to 30,000, which were given circulation in the earlier days of the new régime.

The attempt at partial segregation of the worst cases, which in Spanish times had been begun and carried on by the church authorities as a matter of charity rather than legal proscription, was continued by the Americans both before and after the establishment of civil government; but a systematic plan which had for its object the reduction of the number of new infections and the ultimate eradication of the disease from the islands was not begun until 1906, although the Island of Culion was selected for this purpose as early as 1901.

DESCRIPTION OF THE CULION COLONY AND ITS GOVERNMENT.

This island is well isolated, is approximately 20 by 40 miles in dimension, and is located about 220 miles from Manila in a southwesterly direction. The lepers are permitted to establish themselves at any place on the island, and if they desire to follow agricultural pursuits the necessary animals and implements are provided at government expense. In actual practice, however, it is found that they practically all live in the town of Culion, where everything, including houses, clothing, and subsistence, is furnished for them by the government. A large modern hospital has been established for those who are bedfast or those who desire to undergo special treatment. The town is located on an elevated site, has modern water and sewerage systems, and is largely governed by regulations and ordinances which the lepers themselves make. They elect their own mayor, councilmen, and other municipal officials.

LEPER COLLECTION.

If the work of collecting lepers could have been rushed through with military rigidity, the problem would have been very much sim-

plified, but it was deemed advisable to precede the collection of the lepers by a campaign of education and thereby secure the cooperation of the public rather than its opposition.

After this preliminary work, the plan adopted and still followed, and which the geography of the country so eminently favored, consisted in removing all leprous patients from the well-isolated islands which contained only a few victims, and subsequently recanvassing the Territory two or more times for cases which might have escaped, been overlooked, or which subsequently developed. By the method pursued, the greatest amount of territory was freed in the shortest possible time. In military phraseology, the outposts were captured first and the lines gradually moved forward to the strongholds.

EFFECT OF REMOVING LEPERS.

Experience has shown that when all of the native lepers have been removed from an island, the people of that island may be safely trusted with the duty of keeping foreign lepers from taking refuge there.

SEGREGATION NOT ABSOLUTE.

Commitment to the colony does not mean permanent separation from friends and relatives, since provision has been made for restricted visiting under proper safeguards from a neighboring island on which the noninfected are permitted to camp or to live permanently if they desire, in order that they may conveniently visit their friends and relatives.

LEGISLATION RELATIVE TO SEGREGATION.

The law under which the policy of segregation is carried out probably vests more absolute power in the director of health than the laws of other states or countries. Briefly, he has authority to cause to be apprehended every person believed to be a leper and to detain all in whom the bacillus of the disease can be demonstrated. Furthermore, it is the duty of all officials and others to report to the director of health any case of leprosy that comes to their knowledge. Failure to do so is punishable by fine.

RESULTS OF SEGREGATION.

The results of the segregation policy so far have been very encouraging. On March 31, 1909, according to official figures, there were only 2,446 lepers in the Philippine Islands, which fact demonstrates that since May, 1906, when effective segregation was begun, and at which time there were 3,494 cases, the number of deaths has exceeded the number of new cases by 1,048. The falling off in the number of new cases is one of the most encouraging evidences of success. It is estimated from the data on hand that under the old system there were about 700 new infections annually. During the past year there have not been more than 300 new cases, a difference of about 57 per cent. If these results can be brought about by incomplete segregation, it can readily be seen that the prospect of ultimately reducing the number to insignificant proportions is very encouraging.

CENTERS OF INFECTION.

In an address before the Philippine Islands Medical Association more than two years ago, the writer held that whatever might be the views of well-informed persons with regard to the communicability of leprosy, and however widely eminent medical men might differ upon this question, the incontrovertible fact remained that every leper who was capable of giving off lepra bacilli was at least one center of infection, and that it was an utterly hopeless and useless undertaking to attempt to eradicate the disease without removing the source from which it was transmitted, and asked that prophylactic medicine should not be turned aside by a few sentimentalists from its march to a goal which offered the magnificent hope of the complete eradication of this plague from the face of the earth and the saving of many innocent human beings who are now sacrificed annually to this most loathsome disease through sheer sentimentality. As more and more experience becomes available, these views are constantly strengthening, and it is believed that the cases which can not be traced to another case are very few.

EARLY DIAGNOSIS ESSENTIAL.

The most important factor now in connection with the work in the Philippines is early diagnosis. The earliest and most constant symptom observed is a nasal ulcer which is situated in the nasal septum at the junction of the cartilaginous and bony portion. Among 1,200 cases taken in regular order at Culion, these ulcers were noted in 799 lepers. It is the opinion of the writer that if the remaining septa had been examined microscopically, scar tissue would have been found which would have been strong presumptive evidence that ulcers had existed previously. His experience in the examination of more than 2,000 Philippine lepers and of those of Hawaii and of the Louisiana colony near Iberville Parish, confirms the importance and constancy of this sign, which may often be found long before there are any other objective or conscious subjective symptoms.

INCUBATION PERIOD.

Writers on leprosy give the incubation stage from 3 weeks to 27 years. No reliable data has become available here to prove or disprove this theory. Several Americans, whom it is fair to presume were not exposed to the disease in the United States, were found to have the disease within 2 years of their arrival in the Philippines, and 2 Filipinos who successfully passed a strict physical examination upon leaving the Philippines, were found to have leprosy 2 years after they arrived in the United States.

NECESSITY FOR EXAMINING CONTACTS.

Its extent and effect in different individuals or in the same patient at different times are very variable. The writer has seen a number of microscopically positive cases in which the only clinical symptom was a nasal ulcer, perhaps very obscure and innocent looking. Such cases usually come from houses in which advanced cases have existed. For this reason it is customary to have contacts of bad cases examined for this sign and scrapings submitted to microscopical test.

PRECAUTIONS AGAINST INFECTION.

The precaution enjoined at the leper institutions under the bureau of health is to protect the nasal mucous membrane as a first consideration, giving second place to, but not underrating, the old-time precautions. The membrane of the nose is easily protected by nasal plugs of sterilized absorbent cotton.

PROPORTION OF TYPES OF DISEASE.

With regard to the types of the disease in the Philippine Islands, a fair estimate may be found from the fact that of 1,200 cases studied in the order of admission, 374 were of the anesthetic type, 157 of the tubercular type, and 650 mixed cases partaking of the character of both.

It was observed that in a majority of cases the integrity of the eyebrows was disturbed. Among the 1,200, the eyebrows had been entirely destroyed in 264 cases, and in 599 cases half gone. In the remainder of the cases there was generally some impairment of the appendages sufficient to constitute some degree of expressional deformity.

TREATMENT OF LEPROSY.

As health officers, we are naturally more interested in preventing the disease and in the protection of the public than in the care or relief of the individual, yet no remedy within the realm of reason, whether physiological or empirical, has been neglected. In many of the cases after being at Culion for a while, the disease became arrested, and in some cases there is marked improvement without any treatment except that which might come under the head of good food and hygienic surroundings. In one case all clinical evidences of the disease have disappeared, but leprosy bacilli can be demonstrated in scrapings from the septum of the nose. In different cases potassium iodide, mercury, creosote, salicylic acid, chaulmoogra oil, gurgon oil, leprol, Nastin "B," experimental sera, and the X-ray have all been tried without curative effect, except the X-ray, which has proven successful in a few cases, but from our present experience can by no means be regarded as being suitable as a routine treatment. The cases in which it is apparently of value are in the early stage of the tubercular type in young and otherwise healthy subjects. The breaking-down by the X-ray of one large, leprous granuloma of an individual usually results in marked coincident improvement in the granulomata situated in parts of the body far removed, and to which the X-rays have not been applied. One of the cases successfully treated by this method was recently reported in the Medical Record.[a]

San Lazaro Hospital at Manila was the first institution in the world to use the X-ray treatment for leprosy with any degree of success, but this was probably due to the fact that there were a larger number of cases to choose from and the particular type which yielded to this form of treatment came under observation early.

Chaulmoogra oil so far has not proven of value, but owing to the excellent results obtained in Louisiana by Dyer with the crude oil,

[a] Preliminary notes upon a case of leprosy apparently cured with the X-rays, Medical Record, October 31, 1908.

another thorough test of this treatment is being made along the lines upon which it was carried out by him.

SUMMARY.

1. Since segregation was begun in the Philippine Islands in May, 1906, the incidence of the disease has decreased over 50 per cent.
2. That of all the treatments tried, the X-ray is the only one which produced a cure, and that as yet it is suitable for specially selected cases only.

UNITED STATES.

[Reports to the Surgeon-General, Public Health and Marine-Hospital Service.]

Reports from San Francisco, Cal.—Plague-prevention work at San Francisco, Oakland, and Point Richmond, and in Alameda and Contra Costa counties, Cal.

Surgeon Blue reports:

SAN FRANCISCO, CAL.

Date of last case of human plague: Sickened, January 30, 1908.
Date of last case of rodent plague: October 23, 1908.

Week ended July 24, 1909.

Sick inspected	2
Plague	0
Dead inspected	84
Plague	0
Premises inspected	2,179
Houses disinfected	26
Houses destroyed	4
Nuisances abated	194
Rats found dead	17
Rats trapped	1,830
Total rats taken	1,847
Rats identified:	
Mus norvegicus	1,328
Mus rattus	48
Mus musculus	441
Mus alexandrinus	16
Total	1,833
Rats identified as to sex:	
Male	649
Female	680
Total	1,329
Rats examined bacteriologically	986
Poisons placed	156,218

ALAMEDA COUNTY, CAL. (EXCLUSIVE OF OAKLAND).

Date of last case of human plague: Sickened, Sunol, July 27, 1909.
Date of last case of rodent plague: Found, Altamont, July 16, 1909